

AMENDMENT UNDER 37 C.F.R. §1.116
U.S. APPLN. NO. 10/520,463

REMARKS

Applicant notes the provisional withdrawal of **dependent** claims 46 and 48-53 from further consideration in the present application; however, and as stated in the Office Action of October 18, 2006, the Examiner will **examine these withdrawn claims** upon the allowance of a generic claim.

Applicant notes the Examiner's acceptance of replacement drawing sheets filed on May 17, 2007.

Applicant requests the Examiner to withdraw the objection to claim 54 in view of the above amendments thereto.

Applicant also respectfully requests the Examiner to reconsider and withdraw the rejections of claims 38-45, 47, 54 and 55 under 35 U.S.C. § 112, second paragraph, in view of the above amendments to claims 38, 41-43, 45 and 54.

Examiner Fonseca issues the following two statutory prior art final rejections of claims 38-45, 47, 54 and 55:

(1) Claims 38-45, 47 and 55 are rejected under 35 U.S.C. §103(a) as being unpatentable (obvious) over Khamis '749 (**newly cited**) in view of Breaky '417 (previously cited but not applied) or Stewart '588 (previously cited but not applied); and

(2) Claim 54 is rejected under 35 U.S.C. § 103(a) as being unpatentable (obvious) over Khamis '749 in view of Breaky '417, or Stewart '588, and in further view of Huberty '532, and Dial '491 (**newly cited**).

Applicant respectfully **traverses** these rejections.

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(Applicant notes that the Examiner no longer relies on Komasara '693.)

The two rejections under 35 U.S.C. § 103(a) require that the applied references teach, or at least suggest, **all of the limitations** of the rejected claims. Applicant respectfully submits that clearly such is **not** the case here.

More specifically and with regard to rejection (1) and claims 38 and 41, Khamis discloses construction elements which have, as an essential feature, vertically extending openings. These construction elements are, as described in column 3, lines 48-51, "stacked such that openings in the blocks in one row coincide with openings in the blocks in rows vertically adjacent the one row, and so on, upwardly from a first row to a top row". This indicates that the stacked construction elements are mechanically engaged with each other. This is further described in column 7, lines 30-34, wherein the block is described as "having conventional tongue and groove construction to enable such blocks to fit mechanically and snugly together, row upon row".

After these construction elements have been stacked, and following Khamis's method, according to the passage at column 3, lines 60-61, "the blocks have poured concrete means filling at least a portion, including all, of the openings in the blocks". This is further described in the passage at column 11, line 64 – column 12, line 2, setting out the construction method according to Khamis.

In the latter passage, the steps of, how to construct a wall, as taught by Khamis, are specified (column 11, line 40-41). This passage says: "Step 6. Place another layer of blocks on top of the first row. Blocks are 'connected' to each other by 'groove and tongue'. A space of 10

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mm in between blocks is maintained for drainage. Step 7. The volume of voids in each block is filled either with granular soil or concrete."

Thus, according to Khamis, first the blocks are placed onto each other and fit mechanically without using a binder at this stage. Then the blocks get filled with concrete poured into the vertical open columns created by the openings in the construction elements. The concrete poured into the vertical open columns thus has a binding function by forming a vertical column of concrete. The binder thus is placed in the voids of the blocks, and not "between the upper and lower face of the blocks, in particular the binder is not in contact with the tongue and groove (as they are already mechanically engaged), as in Applicant's claimed invention."

According to Applicant's invention, at first, after placing a construction element, the binder should be poured in the grooves of that construction element, and then another block should be superimposed, so as to be in contact with the latter binder. The building method taught by Khamis is thus not only completely different from that required for Applicant's claimed "wall" but also would not produce Applicant's claimed "wall"; therefore, the person skilled in the art would not be motivated even to consider Khamis as being relevant prior art for the present invention.

Even if the purpose of the concrete were the same in Khamis and in the present invention, namely binding the blocks together, in Khamis the binder is applied in a different way and is at a different location. The binder in Khamis does not and cannot form a strip "between the upper face and the lower face" of the blocks as required by Applicant's claims. The consequence of this is that the binder in Khamis cannot contribute to the "alignment", as in Applicant's invention.

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The Examiner correctly admits that Khamis does not disclose "the construction elements being assembled to one another within the wall by means of a binder, the binder being applied in the groove in such a way that a strip of the binder is formed between the upper face and the lower face of the construction elements".

However, **contrary** to what is asserted by the Examiner, it would not (and could not) have been obvious to the person skilled in the art "to modify the wall of Khamis to include a binder between the construction elements as taught by Breakey or Stewart", as proposed by the Examiner. A person skilled in the art would not have been motivated, starting from Khamis, to include a binder between the construction elements of Khamis in a manner taught by Breakey or Stewart, because this would go against the global concept taught by Khamis. This will be explained hereunder.

Specifically, if the skilled person were to attempt to include a binder between two construction elements superimposed by using Khamis's method, the person would not be very successful, as he/she would then have to apply the binder in the groove 46 of an element and place another element on top. Because of the load of this other element, the mechanical engagement of the tongue and the groove, and the narrow width of the partition wall, the binder applied in the groove 46 will be expelled from the groove 46 and fall into the vertical openings 42. This would cause a substantial waste of binder.

The main reason why the Examiner's proposed combination would not work is because the surface area on the upper face is too small due to the vertical openings in the element. Moreover, if the binder should have to be applied in the groove, the small width of the groove,

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due to the vertical openings, would substantially limit the amount of binder to be applied into this groove. So, to successfully apply the binder in the groove would require that the vertical openings be made smaller and the width of the groove larger. This would, however, decrease the functionality of these openings, which in Khamis are essential in the building process, and thereby completely vitiate the purpose and invention of Khamis. Thus, the Examiner's proposed combination of Khamis and Breakey or Stewart, is untenable and would **not** produce the subject matter of any of the rejected claims.

Thus, the person skilled in the art would not even consider combining Khamis with Breakey or Stewart, and apply a binder between the construction elements disclosed by Khamis as the disclosed techniques are **incompatible** with each other.

Contrary to what the Examiner argues, it is not a matter of "user preference" to place the binder in the groove in such a manner that "a strip of the binder is formed between the upper face and lower face of the construction elements". Claim 38 clearly requires that the strip form "the sole contact between the two superimposed elements". This feature of the claimed "wall" is essential to meet the object of the invention.

It is because this strip of binder forms "the sole contact between the upper face and lower face" that "adjustment of the alignment, plumb and height" is possible by means of the binder. If the strip were not to form the "sole contact", there would still be between the elements a mechanical contact which would prevent such an "adjustment" or render it rather cumbersome.

Khamis specifically teaches to apply the binder after the elements are stacked, and to apply this binder into the vertical openings and thus not between the elements. Because the

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elements are specially formed so as to be suitable for the building method of Khamis, and because the surface area of the upper face is too small, as explained above, a person skilled in the art would not consider, or be motivated, to apply a binder between the elements. Thus, it is not just a mere matter of "user preference" as it strongly influences the building method and the characteristics of Applicant's claimed wall.

Thus, Applicant respectfully submits that the subject matter of each of claims 38 and 41 would not (and could not) have been obvious from Kyhamis '749 in view of Breakey '417, or Stewart '588.

With regard to claims 39 and 42, a person skilled in the art also would not consider starting from Khamis to arrive at the claimed subject matter, as explained above, because the Examiner's proposed combination does not lead to a technically feasible solution. It is only a prohibited hindsight analysis which would even provoke the Examiner to attempt to combine Khamis with Breakey or Stewart for the two techniques are simply incompatible. Although Khamis discloses grooves having a substantially trapezoidal shape, Khamis does not teach to use a binder in this groove. To the **contrary**, Khamis even teaches away from using a binder between an upper and a lower face of construction elements by teaching to apply the binder in the vertical openings. There is thus no teaching to the skilled person about any special advantage when using a binder in contact with groove and tongue, because Khamis does not use any binder between groove and tongue. Therefore, Khamis fails to teach or suggest any advantage to having a "trapezoidal" shape in forming a strip of binder. Thus, dependent claims 39 and 42 also would not have been obvious.

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As can be seen in Figure 2 of Stewart, the elements in the figure do mechanically touch each other. Although a strip is formed between the upper and the lower face of the elements, there is no teaching of forming a strip which forms "the sole contact" between these faces. The shape of the grooves in Stewart, therefore, does not teach the skilled person about any advantage in forming the strip, in particular not for the purpose of alignment. Breakey does not disclose a shape which is even close to a trapezoid, and therefore Breakey does not teach the skilled person anything about using this trapezium shape.

With regards to claim 40 and 43, the Examiner states that "the ratio of weight of the construction element to the surface area of the small base of the trapezoidal of protuberance will inherently be inversely proportional to the fluidity of the binder". This statement is conclusory and is made without any support in the cited references. There is no reason why a person skilled in the art would regard this as being inherent. Therefore, the Examiner incorrectly, concludes that the subject matter of these claims would have been obvious.

With regard to claim 44, **contrary** to what is stated by the Examiner, Khamis in view of Breakey or Stewart does not disclose or suggest the "depth of the groove and a height of the protuberance are approximately equal and proportional to a tolerance which is to be accommodated with each construction element". Figures 2 and 6 do not give even a hint to the person skilled in the art regarding this feature. In neither of these references is there a teaching to apply this claimed characteristic which, therefore, is incorrectly held to be obvious (unpatentable).

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With regard to claim 45 again, **contrary** to what is stated by the Examiner, Khamis in view of Breakey or Stewart does not disclose or suggest that the "width of the groove of the construction element is less than a thickness of the load-bearing wall or partition of the construction element". **Contrary** to what is stated by the Examiner, Khamis discloses a groove whose width is even wider than the thickness of the load-bearing wall, as can be seen in Figure 3.

With regard to claim 47, it is correctly stated by the Examiner that the groove is arranged above each of the load-bearing walls or partitions. Khamis discloses an element having vertical openings which are obviously surrounded by walls of a construction element. This means that all the walls of a construction element in Khamis extend vertically. In a vertical construction wall, all vertical walls of a construction element are load-bearing. So, in Khamis, all the walls of a construction element are load-bearing walls, and due to this it is impossible for a groove to be positioned other than on a load-bearing wall. Therefore, this feature is inherent in Khamis and there is no advantage or any special effect in applying it, as it is inherent. As explained above, a person skilled in the art would not start from Khamis so as to arrive at the subject matter. Since this feature does not have any special effect or advantage, the person skilled in the art would not apply it to Breaky or Stewart.

With regard to dependent claims 54 and 55, because these claims are dependent on claim 38, which according to the above argument is novel and non-obvious, these claims also should be patentable. Furthermore, Huberty '532 and Dial '491 do not teach or suggest the above-described deficiencies in the teachings of the Khamis/Breaky or Stewart combination relative to claim 54.

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With respect to the "Response to Arguments", even if Komasara's pattern assembly were considered to be a "construction element", it is not made of concrete material and, thus, it is not relevant prior art.

Applying a binder in a groove so as to form a strip is **not** a mere matter of "user preference", as asserted by the Examiner, if the objective is to realize "alignment" while using the trapezoidal shape of tongue and groove. If too much binder is used, it will take too long to dry and adversely affect the construction efficiency. If not enough binder is applied, it will not be possible to align correctly. It is the gist of the present invention to have realized that, by having the binder strip forming the sole contact between two superimposed elements and by using a groove and a protuberance, an improved alignment could be obtained while increasing the construction speed of the wall.

In summary, then, and based on the detailed analysis presented above, Applicant respectfully requests the Examiner to reconsider and withdraw all claim objections and rejections, and to allow the presently rejected claims 38-45, 47, 54 and 55. Also, since a generic claim is now allowable, Applicant respectfully requests the Examiner now also to examine and to allow the presently withdrawn claims 46 and 48-53.

If for any reason the Examiner feels that application is not now in condition for allowance, the Examiner is respectfully requested to **call the undersigned attorney** to discuss any unresolved issues and to expedite the disposition of the application.

Applicant files concurrently herewith a Petition (with small entity fee) for an Extension of Time of two months. Applicant hereby petitions for any extension of time which may be

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required to maintain the pendency of this application, and any required fee for such extension is to be charged to Deposit Account No. 19-4880. The Commissioner is also authorized to charge any additional fees under 37 C.F.R. § 1.16 and/or § 1.17 necessary to keep this application pending in the Patent and Trademark Office or credit any overpayment to said Deposit Account No. 19-4880.

Respectfully submitted,

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WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: January 8, 2007